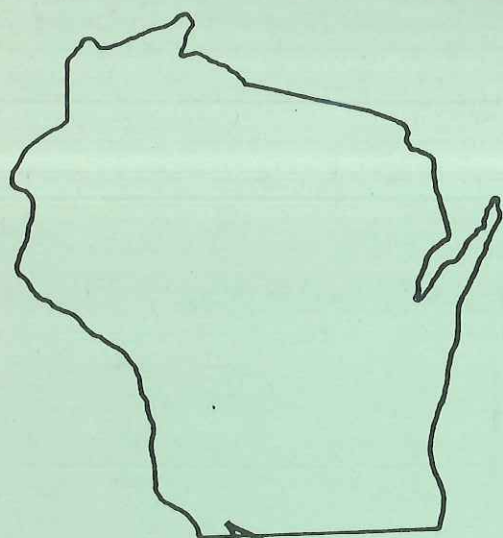




The Galena River Priority Watershed Plan

Designated Management Agencies

Lafayette County Board

Lafayette County Soil and Water Conservation District

Grant County Board

Grant County Soil and Water Conservation District

City of Shullsburg

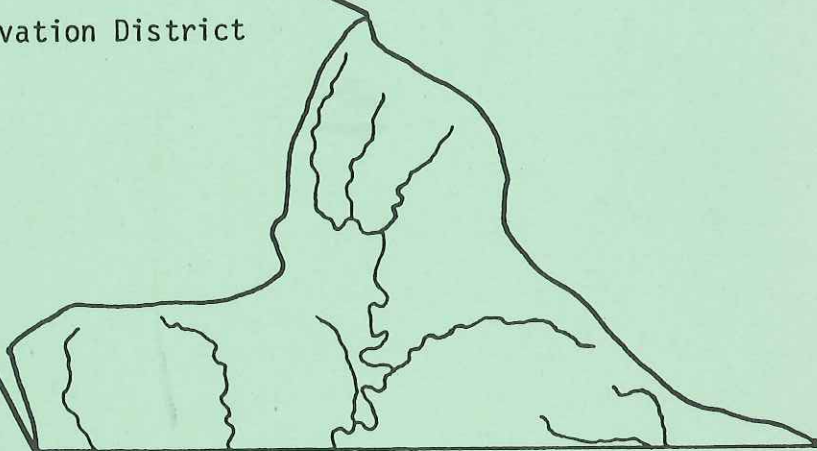
City of Benton

City of Hazel Green

City of Cuba City

City of Sinsinawa

City of Kieler



Cooperating Agencies

Wisconsin Department of Natural Resources

U.S.D.A. Soil Conservation Service

U.S.D.A. Agricultural Stabilization and Conservation Service

University of Wisconsin Extension

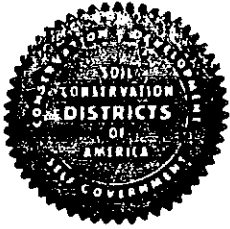
Wisconsin Board of Soil and Water Conservation Districts

This plan was prepared with the assistance of the Wisconsin Department of Natural Resources and the Wisconsin Board of Soil and Water Conservation Districts under the provisions of the Wisconsin Nonpoint Source Water Pollution Abatement Program.

The Lafayette County Board of Supervisors at their November 13, 1979,
County Board Meeting approved the Galena River Watershed Plan and
the Program of Implementation.

Byron Berg
Byron Berg, Chairman
Lafayette County Board of
Supervisors

Nov. 13, 1979
Date



Grant County Soil and Water Conservation District

Youth & Agriculture Bldg.
P.O. Box 329

LANCASTER, WISCONSIN
November 21, 1979

Mr. Craig Walters
Wisconsin D. N. R.
Box 7921
101 South Webster Street
Madison, WI. 53705

The Grant County Board and the Grant County Soil and Water
Conservation District Board of Supervisors approve the Galena River
Watershed plan and the program of implementation for the Galena River
Watershed plan.

Richard D. Markus
Chairman, Grant County Board

11-21-79
Date

Daniel J. Keenan
Chairman, Grant County S. W. C. D.

11-21-79
Date

Galena River Watershed Plan

Bureau of Water Quality
Department of Natural Resources
in conjunction with

Grant County Soil & Water Conservation District
Lafayette County Soil & Water Conservation District

September 1, 1979

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INTRODUCTION

In 1978, the State of Wisconsin established a water pollution control cost-share program called the Wisconsin Fund. A portion of this fund, the nonpoint source (NPS) abatement program, is an implementation program focused on meeting the needs identified in the areawide water quality management program which has a long-term objective of fishable, swimmable waters, wherever possible by 1983.

The purpose of the Wisconsin NPS abatement program is to provide grants as an incentive to landowners to install best management practices for controlling nonpoint sources of pollution. Grants are to be made in areas where water quality problems are most severe and control of these sources feasible. Locally administered and voluntary in approach, the Wisconsin NPS abatement program grants funds to landowners on the basis of the expected benefit to the public and to a lesser extent on financial hardship.

The Galena River Watershed is one of five watersheds selected statewide in 1979 as an area for funding. The Galena River Watershed was selected as a priority area because:

1. water quality is being severely impacted by nonpoint sources;
2. improvement in water quality is feasible through the installation of land treatment practices, and
3. the watershed was locally selected as a critical area.

Since the Galena River Watershed project is a water pollution control program and not a land management program, it is essential that water quality goals and objectives be clearly outlined in the watershed plan. Furthermore, the plan must outline the type of water quality monitoring necessary to document both current water quality conditions and changes in water quality conditions. Although many of the land treatment practices used to minimize pollution from nonpoint sources are similar to or the same as soil conservation or livestock management practices, the program will be evaluated on the basis of how well water resources are being improved and protected.

This report provides information on existing conditions and problems so that decisions can be made on where and how the program should be carried out. Section I describes the roles and responsibilities of agencies participating in the Galena River Watershed. Information on land use and major water bodies of the Galena is given in Section II. Water quality goals and objectives are discussed in Section III, as well as methods for evaluating progress made toward these objectives. Section IV outlines how priority management areas have been determined. Finally, Section V describes the best management practices that are needed; treatment costs also are identified in Section V.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

- 1) Water quality of the Galena watershed streams is degraded.
- 2) Stream water quality can be improved through the application of best management practices.
- 3) Local agencies have shown the willingness and capabilities to carry out this program.
- 4) Local cost-sharing assistance is available to help achieve water quality goals.

RECOMMENDATIONS

1. The primary goal of the watershed project is rehabilitating the watershed's streams; however, waters with excellent quality shall also be given top priority for practice installment.
2. Streambank erosion control practices, animal waste control practices, and upland erosion control practices will be used where appropriate to reduce pollutant loadings.
3. Treatment recommendation related to water quality of sub-watersheds.
 - a. Landowners in sub-watersheds with very poor and excellent water quality are top priority - to be addressed by following practices.
 - 1) Livestock operation if it occurs within 660 feet of perennial or intermittent stream.
 - a) Manure storage facilities.
 - b) Barnyard runoff controls if contributing to water quality problems.
 - 2) Streambanks with erosion problems.
 - 3) Upland erosion control practices on steep slopes when installation will improve water quality.
 - b. Landowners in sub-watersheds with poor water quality will receive second priority for use of cost-sharing funds; all sub-items as listed under a. are eligible for cost-sharing.
 - c. Landowners in sub-watersheds with fair and good water quality are not eligible for cost-sharing.
4. Landowners in areas eligible for cost-sharing will receive top priority if they enter into a contract to manage all sources on their property that have a significant impact on water quality.
5. Throughout the implementation phase there should be water quality monitoring sufficient to document changes in water quality.

I. PARTICIPATING AGENCIES

Wisconsin's approach to nonpoint source water pollution control involves many agencies at both the state and local level.

Program responsibilities are legislatively assigned to the Wisconsin Department of Natural Resources (DNR) and the State Board of Soil and Water Conservation Districts (BSWCD) at the state level and to local designated management (DMA) agencies at the watershed level. The local designated management agencies for the Galena River Watershed are Grant and Lafayette County Boards, Grant and Lafayette County Soil and Water Conservation Districts (SWCD), the City of Shullsburg, the City of Benton, the City of Hazel Green, the City of Cuba City, the City of Sinsinawa, and the City of Kieler.

The lead DMA for the Galena River Watershed is the Lafayette County SWCD. All transactions between the state or federal agencies and local agencies are handled through the lead DMA. For instance, cost-sharing money will flow to Grant County SWCD via the Lafayette County SWCD. However, implementation activities occurring in the area of a nonlead DMA requires the approval of that DMA, i.e.; implementation in the city or village requires the city's approval.

The Department of Natural Resources maintains overall responsibility for selection of the watershed and preparation of the watershed plan. DNR has initiated and financed surveys to document water quality and land use conditions in the Galena Watershed. Results from water quality samplings are the primary basis on which implementation decisions have been made.

Primary responsibilities of the State Board of Soil and Water Conservation Districts (BSWCD) relate to assisting the local designated management agencies during the implementation phase of the watershed project. The Board also has responsibility in the area of information/education.

At the local level, responsibilities for implementation lies with the local DMAs who will: prepare the detailed plan for implementation, determine the priority of assistance for cost-sharing, coordinate the use of other cost-sharing monies, solicit and prepare cost-share agreements, screen applications, pay out the cost-share grants, and maintain all applicable records. The Grant and Lafayette Soil and Water Conservation Districts contracted with the DNR to conduct surveys integral to the preparation of this watershed plan.

Other agencies that have assisted in the development of the watershed program at both the state and local levels are the United States Department of Agriculture's Soil Conservation Service, Agricultural Stabilization and Conservation Service, and the University of Wisconsin Extension.

II. WATERSHED DESCRIPTION

The Galena River Watershed is located in Grant and Lafayette Counties within the Grant-Platte River Basin in southwestern Wisconsin and encompasses an area of approximately 242 square miles (154,800 acres): 163.5 square miles are in Lafayette County and 78.5 square miles are in Grant County (see Figure 1). The watershed lies within the unglaciated portion of Wisconsin and is characterized by steep topography: deep, flat-bottomed valleys and narrow, rolling ridges. Soils of the basin are primarily silty loams, upland soils consist primarily of wind-blown loess, whereas the valley bottoms are covered by alluvial soils.

Predominant land use in the Galena Watershed is agriculture: 85 percent of the land is used for some type of agricultural purpose and livestock densities are very high.

There are approximately 200 miles of streams in this watershed. Primary streams are the Galena River, the Shullsburg Branch of the Galena (Fever) River, the Apple River, the Sinsinawa River, and the Menominee River. There are no lakes in the watershed.

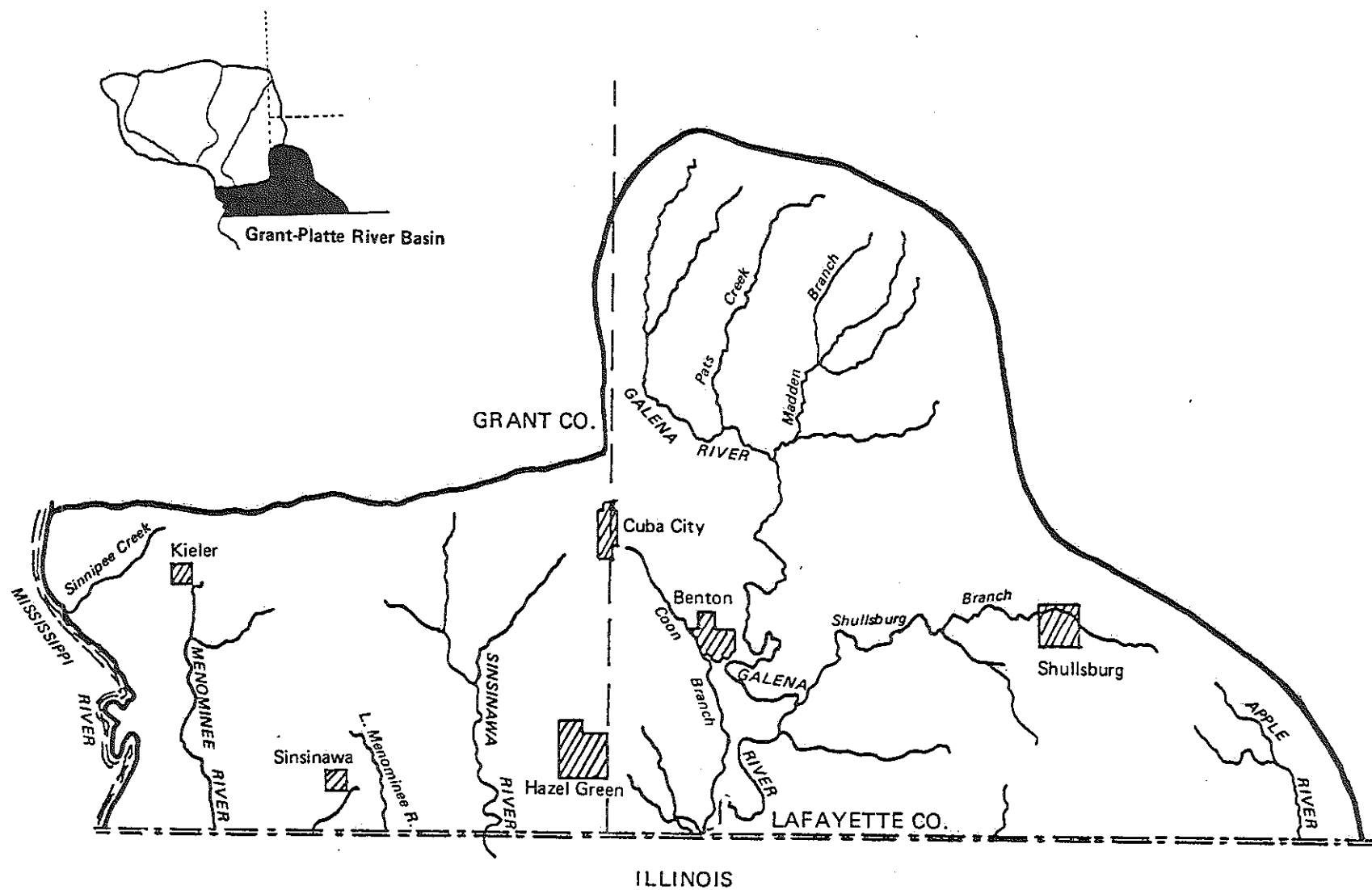
The Galena River watershed is divided into five subwatersheds according to the major rivers listed above. The major subwatershed encompasses the Galena River and Shullsburg Branch which drains 91,840 acres. Agricultural land uses dominating this subwatershed are cash cropping and beef farming. Most of the livestock operations occur in the upper portions of the subwatershed.

The Apple River Subwatershed is located in Lafayette County and is 14,040 acres in size. Cash cropping is the major land use.

The Sinsinawa and Menominee River watersheds are located in Grant County and are similar to the other subwatersheds in size and land use. The Sinsinawa River drainage area is 20,480 acres and the Menominee River drainage area is 24,640 acres. Some of the land is forested, although the major land use is cash cropping and some beef farming.

The lower portions of the Galena River supports an excellent smallmouth bass fishery. The Sinsinawa, Menominee, and Apple Rivers once supported a similar fishery which has been lost in recent years. There has been a corresponding reduction in recreational use of these streams.

FIGURE 1. MAP OF THE GALENA RIVER WATERSHED



III. WATER QUALITY GOALS AND OBJECTIVES

GOALS

There are two possible water quality goals for the watershed:

- (1) Protecting water bodies that have excellent or good water quality.
- (2) Rehabilitating water bodies that have been degraded by nonpoint sources of pollution.

For the Galena River watershed, the water quality goal is primarily rehabilitation. Protection is also a goal in a few high quality streams. An improved or protected stream will be defined in terms of the following parameters:

- (1) fecal bacteria
- (2) biotic index values
- (3) fish diversity and population
- (4) dissolved oxygen
- (5) the way the stream looks, smells

OBJECTIVES

To achieve the goal of rehabilitation and protection within the Galena Watershed, the watershed project will focus on:

- (1) improving biotic index values to the fair category (see below);
- (2) reducing fecal bacteria to less than 200 counts per milliliter;
- (3) having clean looking and smelling streams.

Perennial streams will be the primary target of these objectives.

EVALUATING ACHIEVEMENT OF THE OBJECTIVES

To evaluate if the project is achieving its objectives, the project will:

- (1) Monitor water quality over time using the following techniques:
 - (a) biotic index monitoring
 - (b) bacteria count monitoring
 - (c) fish surveys
 - (d) chemical event monitoring
- (2) Conduct public opinion surveys

Following is a description of each water quality monitoring technique, including an explanation of how the technique can effectively evaluate whether the objectives of the project are being met.

- (a) Biotic Index is a measure of overall water quality, based on the type and number of aquatic insects in a water sample. The index assumes that certain species of insects and/or larvae can only survive in waters of certain quality. This biological technique monitors the general integrity of water and is capable of responding rapidly to changes in water quality.

To calculate the biotic index, each species is assigned a numeric value ranging from 0 to 5. Species intolerant of pollution receive a low number, while pollution-tolerant species are assigned a higher value. One hundred organisms are collected at each sampling site; the organisms are identified and values assigned; and the total is divided by 100 to give the biotic index number. The following ranges of values have been classified according to various levels of water quality.

Table 1. Classes of Water Quality According to the Biotic Index

Biotic Index*	Class of Water Quality	State of Stream
0.00-1.75	Excellent	Clean undisturbed
1.75 -2.25	Good	Some enrichment or disturbance
2.25-3.00	Fair	Moderate enrichment or disturbance
3.00-3.75	Poor	Significant enrichment or disturbance
3.70-	Very Poor	Gross enrichment or disturbance

*Biotic index values are based on combined samples collected in late spring, early summer, late summer and late autumn. For summer samples, 0.18 is subtracted from calculated biotic indexes: for spring and autumn samples, 0.13 is added to calculated values.

- (b) Bacteria counts measure the abundance and ratio of fecal coliform and fecal streptococcus in water samples. Bacteria counts are useful for distinguishing sources of animal waste pollution from human sources although the numbers are highly dependent on water flow and other variables.
- (c) Fish surveys are the measure of abundance or diversity of fish species. This method assumes that certain fishes can only survive in waters of certain quality. For instance, smallmouth bass cannot survive in waters with limited amounts of dissolved oxygen. These fish surveys can be used to establish base line conditions of fish population, type, and diversity. Fish surveys can also indicate areas of degraded habitat and, over time, changes in fish population provide evidence of habitat and water quality improvements. These surveys may also be useful for determining the maximum fishery potential.
- (d) Chemical monitoring is the measure of chemical compounds such as sediment, phosphorus, and nitrogen contained in a water sample. Monitoring can be on a rainfall-event basis or by low-flow sampling. Its advantages are that loadings of specific water quality parameters (the chemical compounds) can be measured and that these parameters are responsive, for the most part, to changes in land use and weather.

Biotic index and bacteriological sampling are the basic monitoring techniques for the Galena River watershed project. Other types of assessments will be made where desirable. The biotic index sampling program should be continued on a spring and fall basis each year. The bacteriological sampling should be continued on a monthly basis each year. Fish surveys should be conducted before and after implementation. Storm event-chemical monitoring should be incorporated to the full extent possible in future years. After initial assessment, some sampling sites will probably be deleted in each watershed; conversely, sites may be added in areas where problems are very severe and implementation intensive.

IV. PRIORITY MANAGEMENT AREAS

Water quality for the Galena River watershed project objectives will be achieved by determining priority management areas where best management practices will be implemented.

A. Determining priority management areas involves identifying:

- (1) where the potential for pollutants reaching streams is great;
- (2) where water quality, according to the biotic index, is very poor, excellent or secondarily poor;
- (3) where land management practices are not widespread and where land management practices can impact on water quality;

These criteria are consistent to the legislative and intent provisions of the Wisconsin Nonpoint Source Abatement program (SS 144.25, NR 121(d)). In addition, delineation of the PMA to exclude areas of good and fair water quality is desirable because: 1) areas of very poor and poor water quality occur generally in headwater areas; therefore, treatment in these areas will improve water quality in both the severely degraded headwaters and in the fair and good areas downstream; 2) limited funding and technical assistance can be concentrated into smaller areas, and 3) the concentrated effort in headwaters will result in greater water quality improvement than would widespread piecemeal implementation. In applying criteria (1) above, experience has shown that the potential for pollutants reaching streams is greatest within a 1/4 mile strip along a stream bank where slopes are greater than 6% or within an 1/8 mile strip where slopes are less than 6%. In the Galena River watershed virtually all land areas fall into the categories.

For criteria (2) above, Biotic Index samples were collected at 55 sites in the Galena River watershed during the spring of 1979. The sampling indicates a wide range of water quality conditions (see Appendix 10). Below is a chart showing the number of stream miles falling into each category of water quality, as defined by the Biotic Index value (see pg. 5).

Table 2. Stream Miles of the Galena River Watershed in Each Water Quality Class*

Water Quality Class	Stream Miles
Excellent	6.0
Good	20.0
Fair	94.0
Poor	70.0
Very Poor	19.0

*For stream reaches between sampling sites, water quality is classed according to the nearest sampling site downstream.

These classifications have been illustrated on 4 maps, one for each major river drainage area, showing where water quality is excellent, good, fair, poor or very poor (see Figure 2-5).

In considering criteria (3), the Animal Waste Survey (a portion of the Land Use Survey conducted by the Grant and Lafayette County Soil & Water Conservation Districts), was used. All livestock concentrations within 1,980 feet of a perennial or intermittent stream were surveyed. These livestock operations were then further categorized by the number of animals (see Table 3). Results of this survey delineated no areas within the watershed that should be considered a PMA that weren't already identified by criteria (1) or (2).

Table 3. Distance to Stream of Livestock Operations in the Galena River Watershed by Size of Operation

Number of Animals	Distance to Stream (feet)		
	0-660	660-1320	1320-1980
0 - 30	57	7	1
31 - 100	153	15	7
100	201	30	7

Two areas were eliminated as a portion of the priority management area on the basis of criteria (3) above. First, the upper reaches of Coon Branch in Lafayette County are rated very poor; however, the primary pollution of this stream are toxic chemicals leaching from mine roasting piles. The effect of BMPs on Coon Branch would be negligible.

Secondly, in considering criteria (3), a survey of point sources within the watershed was taken to eliminate from the PMA an area that has water quality problems stemming primarily from point sources. Table 4 shows the point sources in the watershed. One area was eliminated on this basis.

Sinipee Creek in western Grant County has poor water quality upstream and very poor water quality further downstream, but the nonpoint sources are minimal as indicated by the land use surveys. The primary source of pollution appears to be wastewater from the City of Kieler; therefore the Sinipee drainage area is given a low priority.

Table 4. Point Sources (Wastewater Treatment Facilities) in Subwatersheds of the Galena River Watershed

City	Subwatershed	Projected Completion Date of Adequate Facility
Shullsburg	Galena (lower)	Dec. 31, 1981
Benton	Galena (lower)	Dec. 21, 1981
Hazel Green	Sinsinawa	Sept. 20, 1981
Cuba City	Sinsinawa	June 30, 1982
Kieler	Menominee	May 31, 1981

When criteria (1), (2) and (3) are combined, a PMA is delineated as shown in Figures 6-9. Basically, these figures show the areas in the subwatersheds where water quality, as measured by Biotic Index, is very poor, excellent, or poor, since no areas were eliminated on the basis of criteria (1) or (3) (except Coon Branch and Sinipee Creek).

FIGURE 2

MAP OF THE GALENA-APPLE RIVER SUBWATERSHED INDICATING AREAS OF VARYING WATER QUALITY ACCORDING TO BIOTIC INDEX WATER QUALITY CLASSES

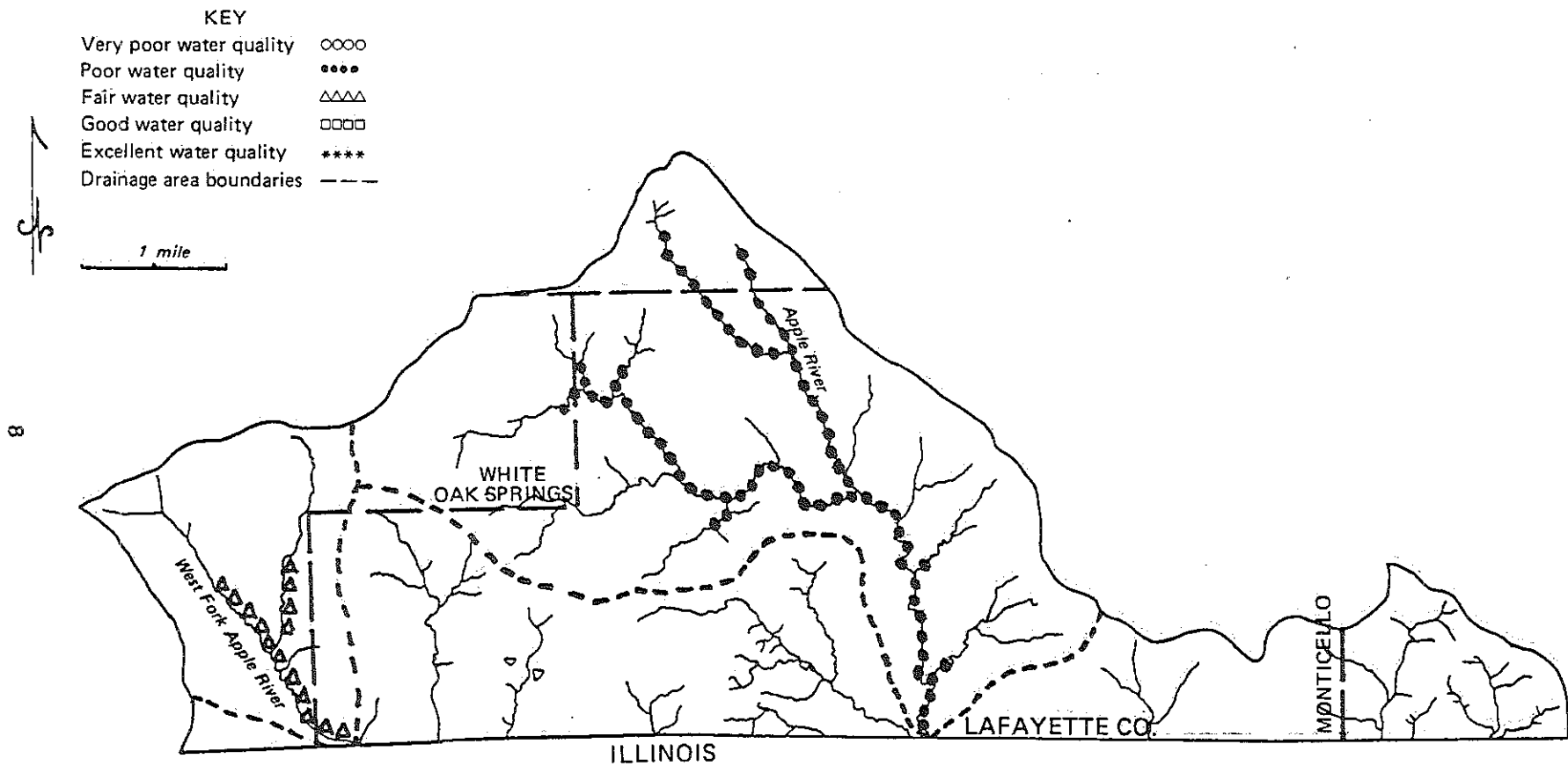


FIGURE 3

MAP OF THE GALENA RIVER SUBWATERSHED INDICATING AREAS OF VARYING WATER QUALITY ACCORDING TO BIOTIC INDEX WATER QUALITY CLASSES

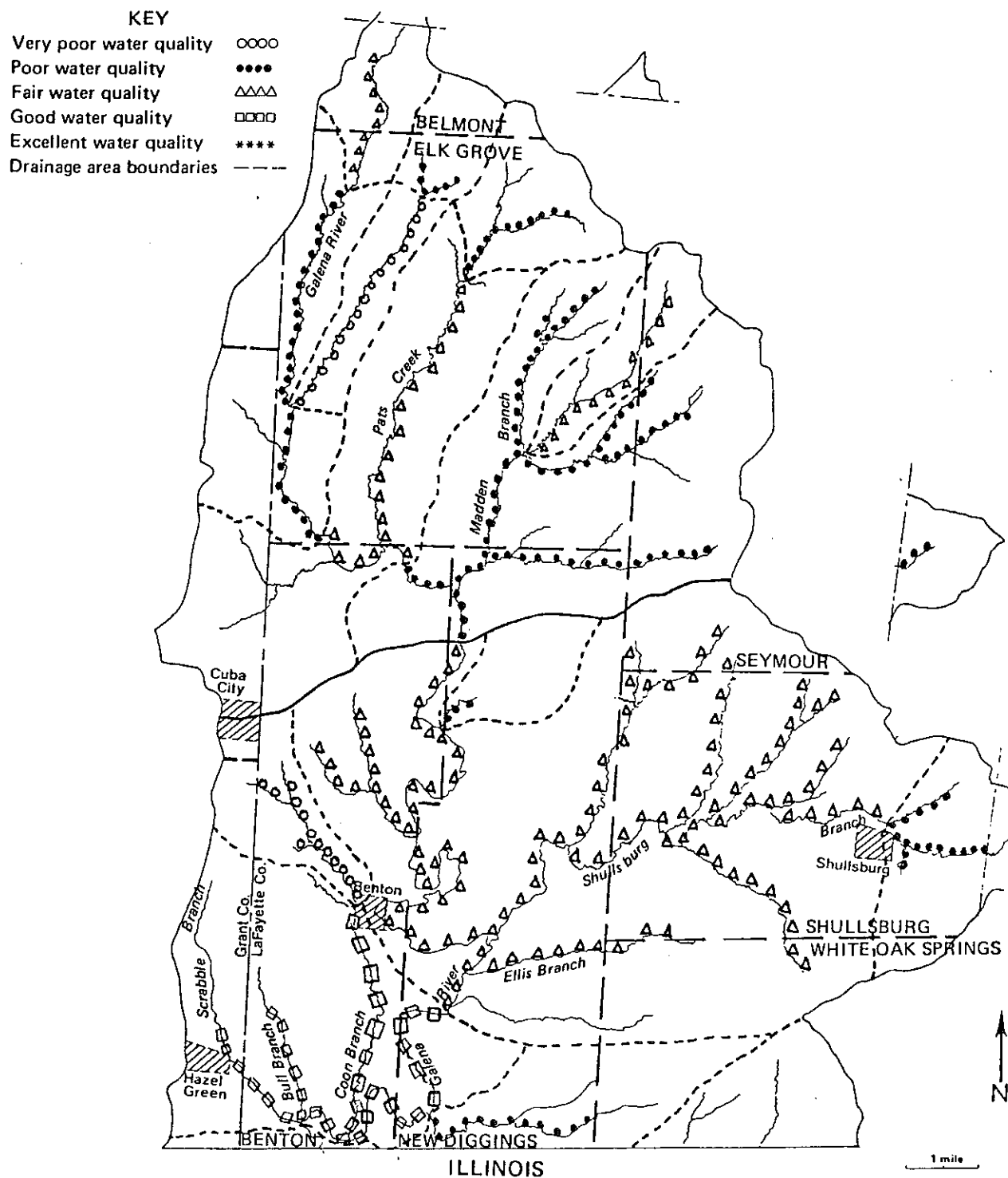


FIGURE 4

MAP OF THE GALENA-SINSINAWA RIVER SUBWATERSHED INDICATING AREAS OF VARYING WATER QUALITY ACCORDING TO BIOTIC INDEX WATER QUALITY CLASSES

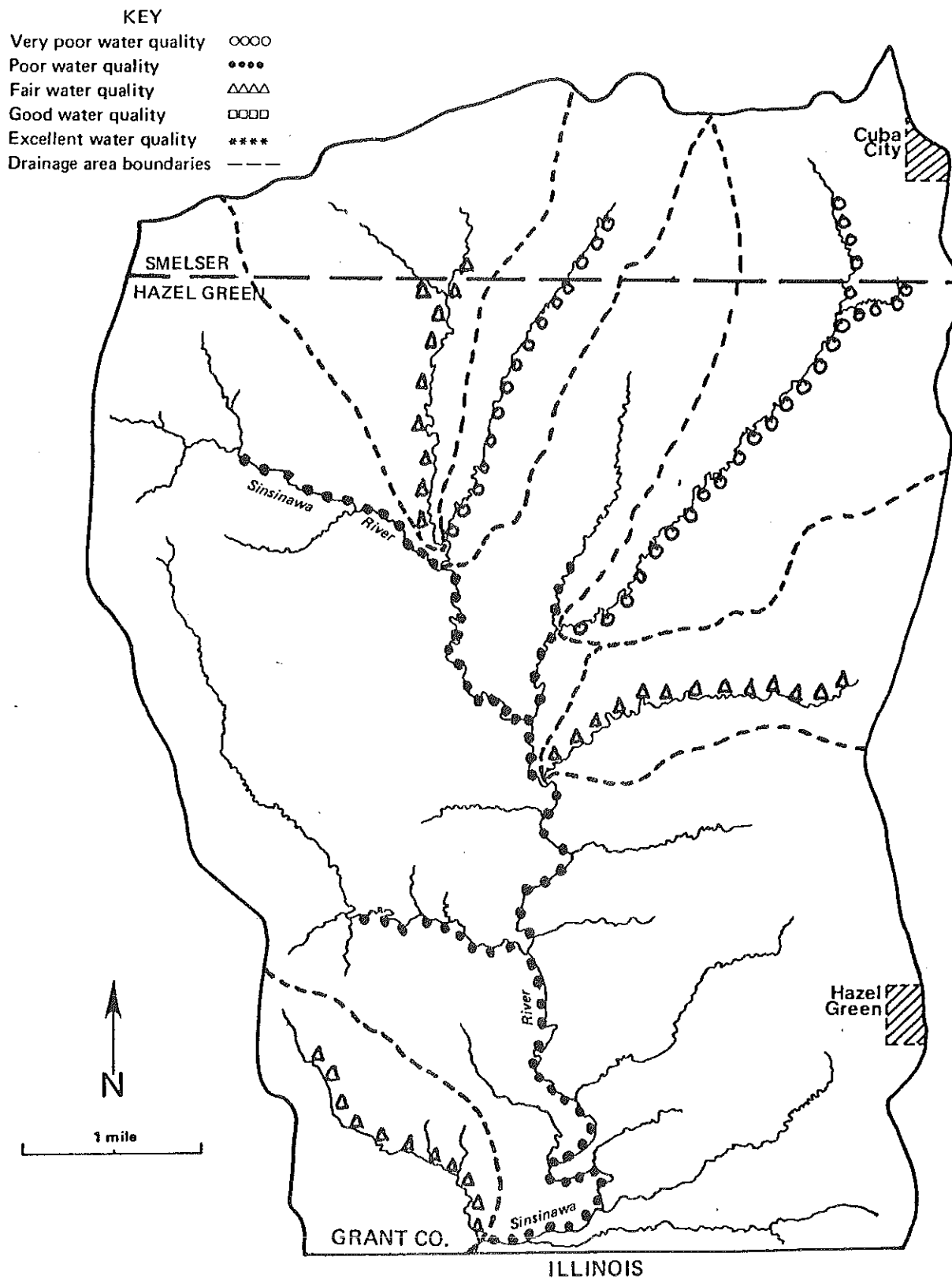


FIGURE 5

MAP OF THE GALENA-MENOMINEE RIVER SUBWATERSHED INDICATING AREAS OF VARYING WATER QUALITY ACCORDING TO BIOTIC INDEX WATER QUALITY CLASSES

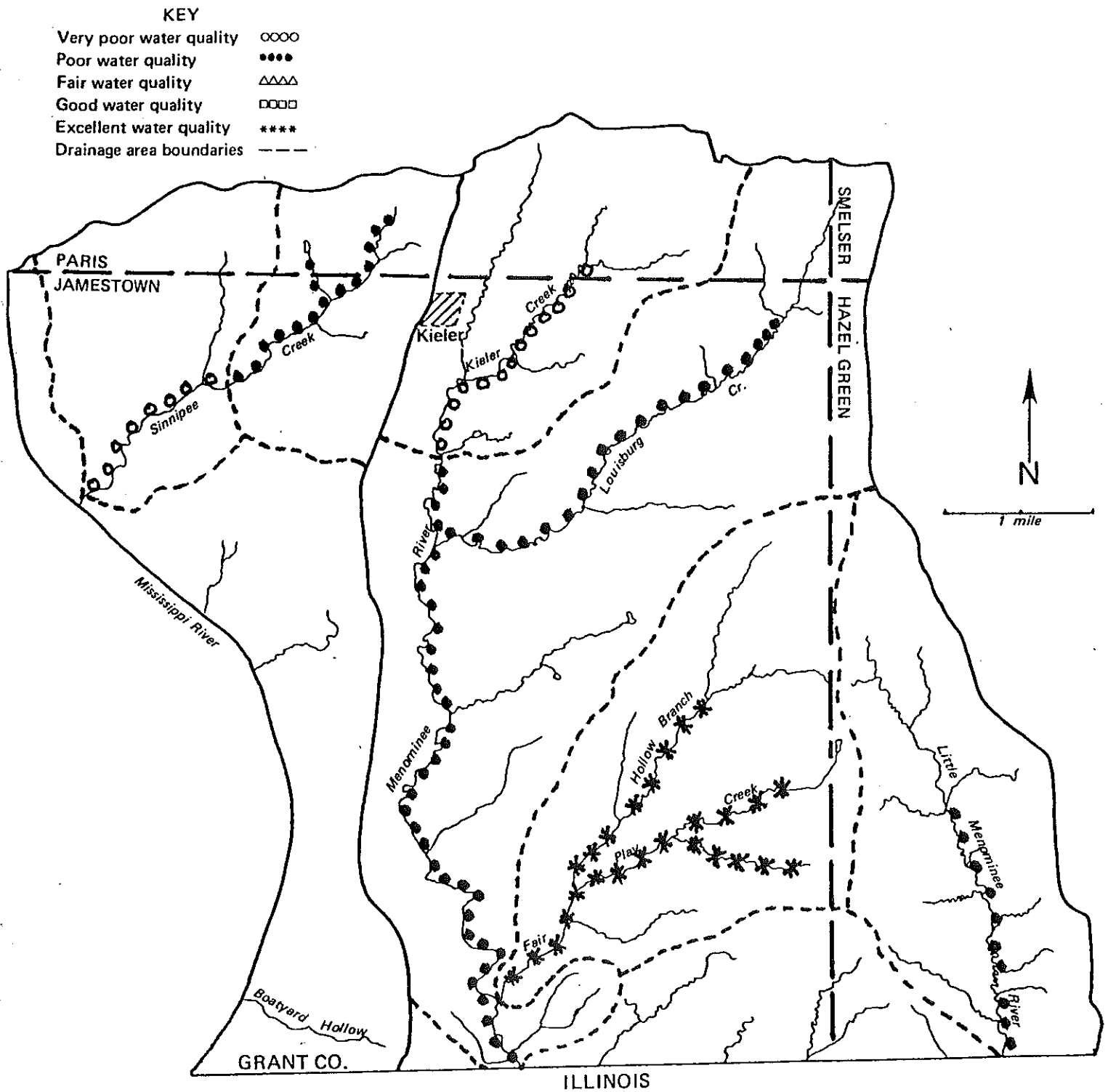


FIGURE 6

MAP OF THE GALENA-APPLE RIVER SUBWATERSHED INDICATING PRIORITIES FOR IMPLEMENTATION IN THE ELIGIBLE AREAS OF THE SUBWATERSHED

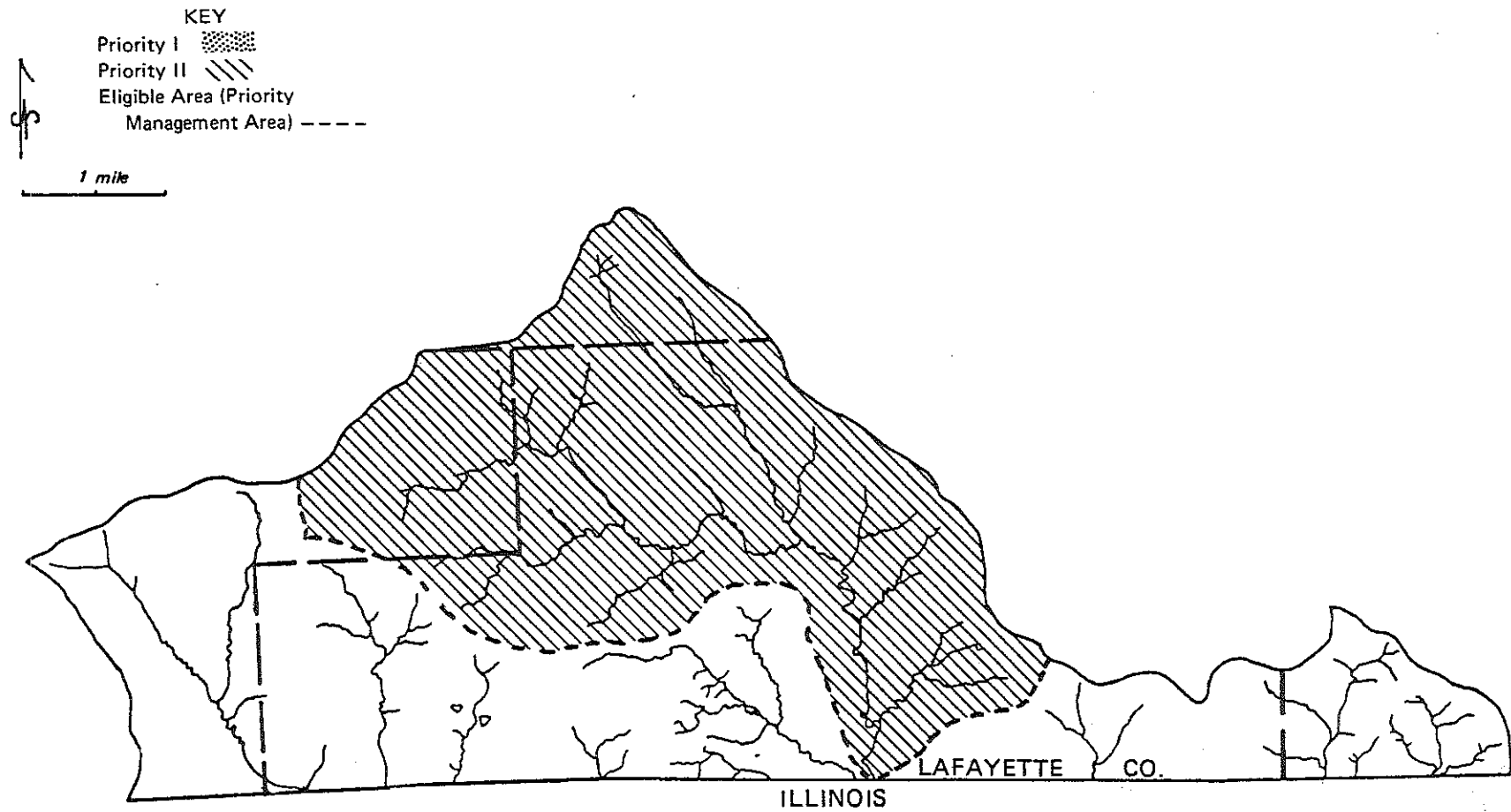


FIGURE 7

MAP OF THE GALENA RIVER SUBWATERSHED INDICATING PRIORITIES FOR IMPLEMENTATION
IN THE ELIGIBLE AREAS OF THE SUBWATERSHED

KEY
Priority I 
Priority II 
Eligible Area (Priority Management Area) 

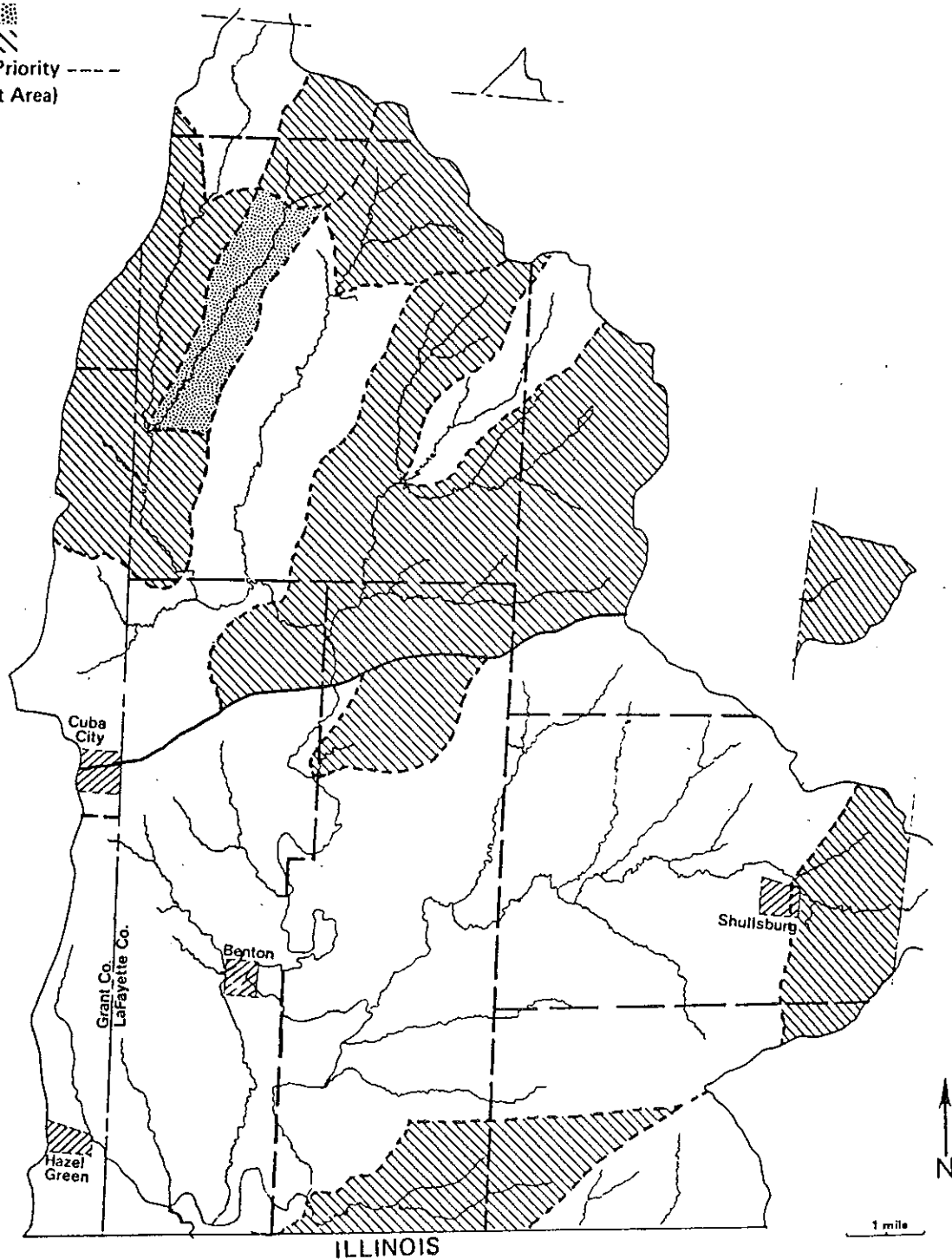


FIGURE 8

MAP OF THE SINSINAWA RIVER SUBWATERSHED INDICATING PRIORITIES FOR IMPLEMENTATION IN THE ELIGIBLE AREAS OF THE SUBWATERSHED

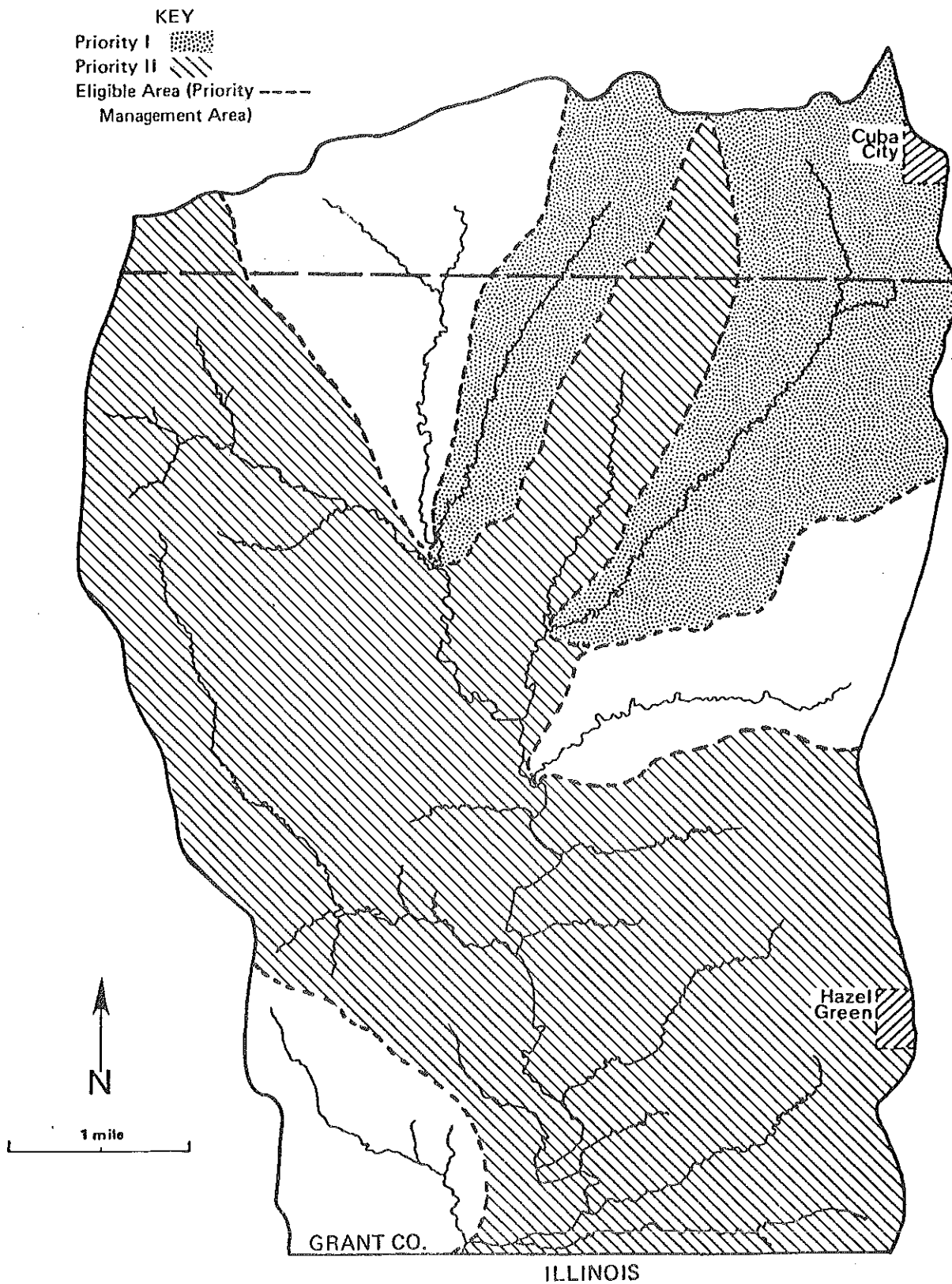
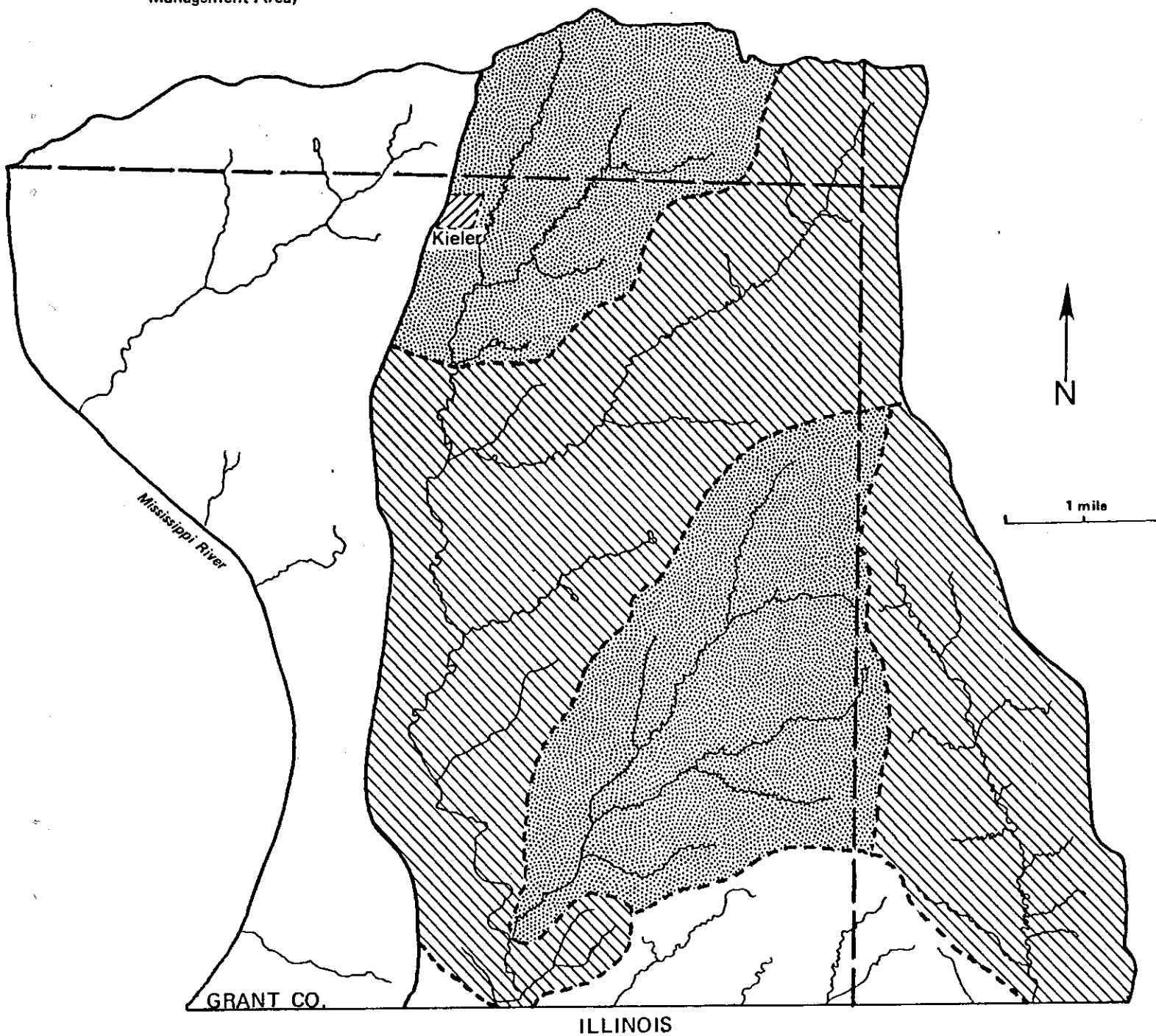


FIGURE 9

MAP OF THE GALENA-MENOMINEE SUBWATERSHED INDICATING PRIORITIES FOR IMPLEMENTATION IN THE ELIGIBLE AREAS OF THE SUBWATERSHED

KEY
Priority I 
Priority II 
Eligible Area (Priority Management Area) 



V. BEST MANAGEMENT PRACTICES AND COST ESTIMATES

This section will list the best management practices needed to mitigate the pollution from nonpoint sources in the Galena River Watershed, the estimated units of practices needed, and cost estimates for implementation (see Appendix 2). Table 5 shows the practices that will be used in the Galena River watershed and the cost per unit.

The Erosion Survey conducted by the Grant and Lafayette County Soil & Water Conservation Districts and the Soil Conservation Service was used to help determine BMP needs and treatment costs. Sample blocks of one square mile representing 10% of the watershed were selected for the survey.

COST ESTIMATES

Cost Estimates are based on surveys by the Grant and Lafayette County Soil and Water Conservation Districts. The original erosion control costs were calculated for the entire watershed; animal waste costs were calculated for all animal concentrations within 1,980 feet of a stream. Table 5 presents these costs.

Table 5. BMP Cost Estimates for the Galena River Watershed Assuming 100% Participation Over the Whole Watershed

Practice	Units Needed	Cost per Unit	Total Practice Cost
Cropland			
Contour Strip Cropping	57,488 acres	8.00	459,904.00
Diversions	177,997 feet	1.10	195,797.00
Terraces	4,998,020 feet	2.30	11,495,446.00
Conservation Tillage	18,913 acres	NA	NA
Grade Stabilization Structures	304	7,500.00	2,280,000.00
Grassed Waterways	1,489,800 feet	2.00	2,979,600.00
		Total	17,410,747.00
Woodland			
Livestock Exclusion	600 acres	30.00	18,000.00
Tree Planting	25 acres	150.00	3,750.00
		Total	21,750.00
Roadbank Stabilization			
Critical Area Seeding	27 acres	250.00	6,750.00
Box Inlet Structures	120	550.00	66,000.00
		Total	72,720.00
Streambank Protection			
Rip Rap	122,004 feet	15.00	1,830,060.00
Stream Crossings	10	2,500.00	25,000.00
Fencing	6,000 feet	.75	4,500.00
Striping and Seeding	137,321 acres	2.00	274,642.00
		Total	2,134,642.00
Animal Waste Management			
Runoff Controls	138	12,000.00	1,800,000.00
Waste Storage Facilities	159	25,000.00	2,975,000.00
Critical Area Seeding	19 acres	500.00	9,500.00
		Total	4,784,500.00
		TOTAL	25,424,454.00

The priority management area concept reduces costs by directing monies into limited drainage areas contributing to severe water quality problems. Costs are further reduced by assuming 50 to 75 percent levels of participation. Table 6 illustrates implementation costs by water quality drainage area assuming 50, 75, and 100 percent participation levels. The figures show that significant water quality improvement in excellent and very poor streams can be achieved in the Galena Watershed at a cost of less than \$2,000,000. Implementing practices in subwatersheds with poor water quality will approximately double costs.

Table 6. Total Project Costs for the Galena River Watershed by Areas of Water Quality Class and Percent Participation^a

	For areas with very poor or excellent water quality ^b	For areas with poor water quality
Area drained (acres)	13,247	51,835
% of watershed	9	33
Costs for 50% Participation (\$)	1,144,100	4,195,035
Costs for 75% Participation (\$)	1,716,151	6,292,552
Costs for 100% Participation (\$)	2,288,201	8,390,070

^aTable 6 uses simple percentages of the total cost figure (see Table 6). Costs will vary by actual practices needed in each water quality area.

^bnot including Coon Branch and Sinipee Creek.

Appendix 1

#	Site Location		
F #1	Dry Hollow 1.2 M. E. of Hwy. 35 on Pd. Hol. Rd. 30 ft. upst. Brg.	3.23	Poor
F #2	0.1 Mi. Bl. Rd. 10 Ft. Upst. Brdg. Sinnippe R.	4.72	V. Poor
F #3	6 Mile Hwy. 11 E. 1st Bdg. Menom. R. 50 Yds. Upstream	3.82	Poor
F #4	Fair Play Ck. Jct. Hwy. 11 Hwy. Z 30 ft. Hwy. Z Bridge	1.74	Excellent
F #5	Menominee R. 50 Yds. Downs. Menom. Lane Bridge	3.36	Poor
F #6	Lb. Cr. 40 ft. dnst. bridge. 1.3 mi. on Spr. Vly. Rd.	3.38	Poor
F #7	Kieler Ck. 40 ft. upst. bridge off Jim Twn. Rd.	4.88	V. Poor
F #8	Kieler Ck. Valley Lane Rd. 10 ft. upstream	4.42	V. Poor
F #9	Sins. R. 2.5 M. on Sins. Rd. 50 ft. upstream from brdg.	3.28	Poor
F #10	Trib. Sins. R. 3 Mi. 50 ft. upstream of bridge.	2.78	Fair
F #11	L. Menom. R. 4.8 mi. Sinsinawa Rd. 30' upstream bridge	3.31	Poor
F #12	Trib. Sinsin. R. 2 mi. on Mill Rd. off 11.50' dwns. bri.	3.41	Poor
F #13	Sinsinawa R. 4 mi. dwn. center rd. 50' upstr. bridge	3.68	Poor
F #14	Trib. Sins. R. .2 mi. on York Rd. 20 ft. up from brdg.	3.31	Poor
F #15	Trib. of Sins. R. 1.1 mi. to Church Rd. 10 ft. ups. br.	3.00	Fair
F #16	Trib. Sinsinawa R. 2 mi. Hollow Rd. 20' upst. bri.	4.20	V. Poor
F #17	Trib. Sins. R. 1 mi. Kirkwood Rd. 50 ft. dwnstrm. of br.	4.99	V. Poor
F #18	Trib. Sins R. 1.4 mi. Kirkwood Rd. 50 yds. dwn str br	3.04	Fair
F #19	Gal R. 1.1 mi. hwy. 81 E. off Hwy's 80, 81.60 ft. upst. br.	3.47	Poor
F #20	Gal. R. 1.2 mi. Hwy. 81 E. off Hwys 80, 81.20 ft. upstr. f. bri.	3.94	V. Poor
F #21	Gal. R. 8 mi. back Rd. off S. Gal. Rd. 20 ft. upst. from brid.	3.44	Poor
F #22	Pat's Ck. 1 mi. on S. Gal. Left B. Rd. 7 mi. to bri. 20 ft. ups.	2.97	Fair
F #23	Gal. R. 1.9 mi. 81 E. off 80, 81. S. Gal. Rd. 1.9 to bri.	3.55	Poor
F #24	Gal. R. 40 ft. dnst. brdg.	2.76	Fair
F #25	Madn. Bran. 30 ft. upst. bridg.	3.55	Poor
F #26	Gal. R. 30 ft. upst. brdg.	3.79	Poor
F #27	Trib. Gal. R. Windy Pt. Rd. 30 ft. dwnstr. of bridge	3.54	Poor
F #28	Trib. Gal. R. Hwy. I .5 mi. Fr. Knee Deep Rd. 20 ft. upstr.	3.56	Poor
F #29	Madden Br. 60 ft. Upstr. Fr. Brid. mi. on Red Sch. Rd.	3.50	Poor
F #30	Trib. Gal. R. 1.9 mi. on Hwy from Knee Deep Rd.	3.46	Poor
F #31	Trib. Gal. R. Jct Hwy. 81 and Hwy 126. 60 ft. ups.	2.98	Fair
F #32	Madden Br. .5 mi. on Hwy. 81 N. of Jct 81 & 126. 10 ft. upst.	3.25	Poor
F #33	Pats Cr. center Dr. 10 ft. upstr. from bridge	3.43	Poor

#	Site Location		
F #34	Gal. R. .3 mi. on Coll. Fm. Fd. 10 ft upstr. Fr. Brid.	3.86	Poor
F #35	Gal. R. College Farm Rd. 40 ft. dwnstr. from Bri.	2.84	Fair
F #36	Trib. Gal. R. 30' dnst. brdg.	2.26	Good
F #37	Trib. of Gal. R.	2.29	Good
F #38	Cn. Br. 30' Dnst. Drdg.	2.05	Good
F #39	Gal. R. 50' Dnst. Brdg.	2.28	Good
F #40	Klsy. Br. 40' upst. brdg.	3.63	Poor
F #41	Ellis Br. 30' upst. brdg.	2.58	Fair
F #42	Shbr. Br. 50' upst. brdg.	2.45	Fair
F #43	Shbrg. Br. Jon Rd. 50' Upst. Brdg.	2.52	Fair
F #44	Shbrg. Br. Hwy. 11 50' Upst. Brdg.	2.56	Fair
F #45	Gal. R. 50 yds. upst. brdg.	2.38	Fair
F #46	Gal. R. 150 yds. upst. brdg.	2.99	Fair
F #47	Cn. Br. 40' upst. Hwy. 11+Cty. J.	No Organisms	V. Poor
F #48	Cn. Br. 20' upst. bntn. prk. +Dnp. Rd.	No Organisms	V. Poor
F #49	Trib. Gal. R. Bntn. Rd. Jnksvl. Rd	3.06	Fair
F #50	Shbrg. Br. 20' Dnst. Brdg.	2.53	Fair
F #51	Shbrg. Br. 20' Upst. Brdg. E. Frdshp. Rd.	3.42	Poor
F #52	W. Apl. R. 20' Dnst.	2.68	Fair
F #53	Trib. Apl. R. 20' Upst. Brdg. Hwy. W	3.22	Poor
F #54	Trib. Apl. R. 25' Upst. Jct. Hwy. A+W	3.30	Poor
F #55	Apl. R. Hwy. W 40' Upst.	3.47	Poor

Appendix 2

Cost-sharing for Best Management Practices

I. Introduction

The overall goal of the Wisconsin Nonpoint Source Water Pollution Abatement Program is to make the state's lakes and streams swimmable and fishable. In order to help meet this goal the program offers financial assistance to landowners, operators and municipalities for installing or applying best management practices. Best management practices are defined as:

practices, techniques or measures which are determined to be most effective, practicable means of preventing or reducing pollutants generated from nonpoint sources to a level compatible with water quality goals. They are identified in the areawide water quality management plans and priority watershed plans.

The purposes of this booklet are to identify: 1. the rural and urban best management practices and the components of those practices eligible for cost-sharing; 2. the state maximum cost-share rates for each eligible practice; 3. the cost-sharing conditions designated management agencies must certify are being met by land users; and 4. the minimum cost-sharing conditions the land user must meet to comply with the cost-sharing agreement. Some best management practices do not require cost-sharing because they are low-cost or no-cost or provide a high degree of benefit to the land user. The practices which will not be cost-shared are listed in Section VI of the booklet. Efforts have been made to make the cost-sharing under this program as compatible as possible with the Agricultural Conservation Program (ACP), administered by the Agricultural Stabilization and Conservation Service. This booklet will be reviewed annually.

II. Cost-share rates

The Department of Natural Resources in consultation with the Board of Soil and Water Conservation Districts is required to identify a maximum cost-sharing rate for each best management practice. The maximum cost-sharing rate identified in this booklet represents a ceiling. Local designated management agencies may use any rate at or below the ceiling.

Section 144.25 of the Wisconsin Statutes states cost-share payments shall not exceed 50% of the cost of implementing the best management practice except as follows:

1. The maximum rate may be increased to as much as 70% where: a) the practice produces benefits for the applicant but the main benefits to be derived are related to improving offsite water quality and b) limiting the cost-sharing to 50% would place an unreasonable cost burden on applicants.
2. The maximum rate may be increased above 70% for certain practice where: a) the practice produces negligible benefit to the applicant with the benefits to be derived related to improving offsite water quality and b) limiting the cost-sharing payment to 70% would place an unreasonable cost burden on applicants.

In order for a specific practice to receive cost-sharing above 70%, county cost-sharing must be provided. The county cost-sharing may be matched by supplemental state cost-sharing up to 10%. For example, a streambank protection practice could have 80% state cost-sharing if the county provides 10% cost-sharing.

State funds may be the sole source of cost-sharing or may be used together with federal cost-sharing, such as ACP, up to 70%. The remaining costs must be met by county cost-sharing or borne by the landowner. For example, a manure storage facility could receive 70% cost-sharing in state funds or 35% federal funds and 35% state funds. In either case, the cost to the land user is the remaining 30%.

Additional guidance for determining cost-share rates is provided in NR 120 of the Wisconsin Administrative Code. They are:

1. Practices which are very effective for pollution control and which have high capital costs should have higher rates.
2. Practices normally used for crop or livestock production or street sweeping should have lower rates.

Table 1. summarizes an evaluation of the cost-share eligible practices in relation to four major criteria and identifies the state's maximum cost-share rate.

III. General Policies

1. Only best management practices installed at specific locations necessary to improve or protect water quality are eligible.
2. Rural and urban areas are eligible.
3. Cost-sharing is limited to areas of the state with approved areawide water quality management plans.
4. Cost-sharing is limited to priority management areas in priority watersheds or areas likely to be within a priority management area in other watersheds.
5. Cost-sharing is not available for the following:
 - a. mining activities
 - b. construction activities* on privately-owned lands (e.g. erosion control practices for construction of subdivisions)
 - c. silviculture activities (excluding farm woodlots)
 - d. septic systems (small scale onsite human domestic waste disposal systems)
 - e. dredging activities
 - f. practices installed primarily for flood control purposes
6. When two or more practices are of equal pollution control effectiveness and compatible with the use and management of the land, the maximum cost-share will be based on the least-cost practice. For example, a manure storage tank (\$50,000) and a solid stacking pad (\$8,000) may provide equal pollution control of manure. While the farmer may desire to install the more expensive manure storage facility in order to enhance his operation, cost-sharing will be based on the least cost alternative.
7. Cost-sharing is not available for practices which:
 - a. are normally and routinely used in growing crops
 - b. are normally and customarily used in cleaning of streets and roads
 - c. have drainage of land as the primary objective
 - d. installation costs can reasonably be passed on to potential consumers.

*This does not include construction of best management practices.

IV. Best Management Practices Eligible for Cost-Sharing

The pages following Table 1 identify the best management practices and their components eligible for cost-sharing and conditions the land user must meet to comply with the cost-sharing agreement. The conditions represent a statewide minimum. Designated management agencies may make the conditions more stringent.

Designated management agencies are encouraged to coordinate local adjustments to cost-share rates and conditions with the County Agricultural Stabilization and Conservation Committees.

Appendix 3

PROGRAM OF IMPLEMENTATION

FOR THE GALENA RIVER WATERSHED PLAN

The initial implementation efforts of this cost-sharing program will be directed to the drainage areas of stream reaches that are classified as very poor, poor or excellent water quality. These drainage areas are called priority management areas and this concept was detailed earlier in this plan.

It should be pointed out, however, that the number of priority management areas that will actually receive funding will be further screened by the level of landowner support and interest anticipated in each priority management area. This assessment of landowner interest will be discussed in the information/education section of the program of implementation.

It is the long range goal of this program that at least 75% of the needed best management practices get installed or implemented within the priority management areas.

Designated Management Agencies:

The designated management agencies for the Galena River Watershed Program in Grant and Lafayette Counties are the Soil and Water Conservation Districts from each county and their respective county boards. The Lafayette County Soil and Water Conservation District and County Board will serve as the lead designated management agency. It is the responsibility of the designated management agency in each county to provide overall coordination, administration and implementation of this nonpoint pollution abatement program.

Project Managers:

Each of the designated management agencies will appoint a project manager to oversee and coordinate the day-to-day operations of the program. In Grant County, the District Technician will serve as a project manager, and in Lafayette County, the County Conservationist will serve in this capacity. It is the responsibility of each project manager to be informed and knowledgeable about all aspects of this cost-sharing program to provide an information link and serve as liaison between the designated management agencies, state and federal agencies and the interested public. The project manager will also monitor contracts between the designated management agencies and other agencies, organizations or individuals assisting with the implementation program.

The designated management agencies will assign additional specific responsibilities to the project managers as needed.

Agencies and Governmental Units:

A number of agencies presently assist and provide support services to Soil and Water conservation Districts and it is envisioned that they will also assist in the Galena River Watershed Program. The agencies and their role and responsibilities in this program are indicated as follows:

1. Soil and Water Conservation Districts (SWCD) - As discussed earlier, the SWCD's in each county will serve as designated management agencies. The staff of the SWCD will provide overall coordination of the program, including fiscal management, and will also assist the Soil Conservation Service in the planning, designing, and layout of best management practices. The Staff may also provide assistance for the implementation of the program within incorporated areas of the watershed - at the approval of the cities or villages that may become involved.

2. The State BSWCD will assist the designated management agencies with fiscal management, record keeping, information and education programs and overall program management. The State BSWCD will administer program management funds for technical assistance, administration, and information and education programs.
3. County Board (jointly designated as a designated management agency with soil and water conservation districts in unincorporated areas of the watershed). Related committees (ag, extension, zoning) of the county boards will work with the soil and water conservation districts to develop the budget for the program. The county board may supplement the Wisconsin Fund if county funds are available. The appropriate committees of the county board are responsible for developing subdivision ordinances, erosion control ordinances and other ordinances that may become necessary during the life of the program.
4. Soil Conservation Service will provide technical assistance to the SWCD for management practice design and layout. The district conservationist will be responsible for assuring that the practices recommended and installed will meet the need for water quality improvement.
5. Agricultural Stabilization and Conservation Service (ASCS) - The committee and staff of the ASCS are responsible for management related to conservation programs in the agricultural portions of the watershed. In Grant County, ASCS will assist with administration of cost-sharing funds for this program. Because of the overlap in programs, local cooperation between ASCS and the SWCD's is essential for a successful water quality improvement program.
6. University of Wisconsin-Extension Service - A high priority for involvement in the water quality improvement program has been set at the state level. DMA's need to involve resource, agricultural and farm management agents in appropriate aspects of the program. Their speciality is to design, coordinate and engage in, with others, public information/education programs as the keystones of the voluntary approach.
7. Department of Natural Resources (DNR) - Staff specialists for the DNR will be responsible for evaluation of water quality improvement in the watershed area.
8. Local Units of Government - Villages, cities (DMA's in their respective areas) need to be involved in carrying out the program to abate the nonpoint sources of pollution within their jurisdiction.

Public Information And Education Program:

The objective of the information and education program is to create an awareness and understanding and to generate interest and support among landowners for the Galena River Watershed Program. It is further the intent of this program to develop and distribute sufficient information to allow the landowner to evaluate and make intelligent decisions regarding his involvement and participation in this cost-sharing program.

Overall responsibility for implementing and coordinating the information/education program will be provided by the University of Wisconsin-Extension Service. Assistance will also be provided when necessary and appropriate by the other agencies involved in this project - namely the Soil and Water Conservation Districts and the Soil Conservation Service. It is essential that the information/education program is closely coordinated with other aspects of the Galena River Program, therefore, close contact and coordination will be maintained between the project managers and University Extension Agents in each county.

During the early stages of the implementation of the Galena River Watershed Program, information/education efforts will be directed to all landowners in the watershed area. This informational effort will be general in nature and designed to acquaint the landowner with the basic features and concepts of the program. This information will be carefully developed to impress upon residents of the drainage area that all landowners will not be eligible for cost-sharing assistance during the initial phases of the project. The concept of "priority management areas" will be clearly identified in these informational activities.

The information/education efforts will focus primarily on the landowners within the priority management areas identified earlier in this plan. In fact, the initial information/education efforts within the priority areas will serve as a mechanism for determining public support and acceptance of the Galena River Program and ultimately helping to decide into which of the priority management area or areas to focus cost-sharing and technical assistance.

Information/education activities will be conducted throughout the duration of the implementation of the Galena River Watershed Program. The main thrust of information/education efforts will be exerted during the early stages of the project and will gradually taper off through later stages of project implementation.

The following listed activities will make up the information/education program:

1. Newsletters

Developed and distributed throughout the duration of the project. Used as a means to provide background information and status reports on the progress of the program. Developed initially to all potentially eligible landowners in the drainage area, then later to landowners in priority management areas. The newsletter will be distributed on a quarterly or as needed basis.

2. Fact Sheets

A series of technical bulletins detailing the use and effectiveness of various best management practices. Designed to provide reference material to the landowners about management practices. To be developed by the UW-Extension Service with review by appropriate agencies and individuals. To be used in one-to-one contacts.

3. Slide Programs

A series of two or three brief and concise slide programs consisting of 8-12 slides. Each program to discuss a specific subject area such as barnyard and waste management, tillage methods, etc. Each program will be accompanied by a typed script. The programs can be used at town meetings, schools and special interest group meetings. Developed during the first year of the program implementation and used throughout the project duration.

4. Information Packets

Two-pocket folders containing information such as a map of the watershed and priority management areas; schedule of cost-share rates, fact sheets, tax management aspects of pollution control and other information as determined to be necessary. The packet will be given to landowners through personal contacts and will serve as a place to file new information as it is developed and distributed.

5. Self Evaluation Questionnaires

A questionnaire consisting of a series of questions for the landowner to answer. This will not be mailed to the designated management agency offices, but rather to be used by the landowner to help him decide for himself "how he measures up." To be developed by the University Extension Service with review by appropriate agencies involved.

6. Kitchen-Table Discussions

The first person-to-person contact to be initiated will be the kitchen-table discussions. This will consist of a discussion between a small group of landowners (4-5) and the different agency personnel involved in the program. Town board chairmen in the areas involved will be contacted, and at their recommendation, four to five farmers will be contacted. These individuals will make up the local discussion group. It is important that these individuals have a positive attitude towards soil and water conservation and that they are also viewed as "leaders" in their communities.

The discussion groups are intended to talk about the general aspects and to generate support for the Galena River Watershed Program and to facilitate the one-to-one contact process.

It is envisioned that the responses received from these discussion groups will help to determine the priority management area or areas to receive technical assistance and cost-sharing dollars.

7. Town Meetings

Following kitchen-table discussions, meetings will be held in the respective priority management areas. These meetings will be held for the purpose of further explaining the program and answering questions from the landowners.

8. Farm Field Tours

Tours of farms within and outside of the priority management areas to give farmers a firsthand look at the different management practices that are eligible for cost sharing. It is also possible that these tours can be used as an educational tool with school groups. This activity will be generated in the fall of 1980.

9. Presentations

These will be more formal and generalized than town meetings and aimed primarily at school classes, conservation groups, and service organizations.

10. Workshops/Clinics

Workshops and clinics consist of educational programs in which information on specific subject matter will be presented to landowners. Suggested topics include seminars on waste management and soils. These will be presented and available to landowners that are in need of and have expressed an interest in learning more about a particular management practice.

11. Mass Media

The media will be utilized when appropriate to announce meetings and provide updates on the status of the program. This will be an ongoing activity throughout the duration of the project. If possible, feature articles detailing the involvement and participation of specific farmers in the program will also be developed.

12. Personal Contacts

Perhaps one of the best mechanisms for informing landowners about the program is through one-to-one contacts, both in the field and in the office. These personal visits will serve as a means for generating interest in the program as well as discussing the technical aspects of management practices.

The following table indicates the information/education activities, the responsible agency and an estimated cost for developing and implementing these activities:

INFORMATION/EDUCATION ACTIVITIES AND ESTIMATED COSTS

TABLE

Activity	Primary Responsibility	Non-salary Costs (see note)	COST ESTIMATE		
			Salary Cost	absorbed in current program (1)	additional cost (2)
Newsletter	UW-EX	\$100 (paper) ⁽²⁾	168	-0-	\$1224
Fact sheets	UW-Ex	\$900 ⁽¹⁾ \$300 \$600 ⁽²⁾	-0-	-0-	-0-
Slide show	District, UW-EX	-0-	20	\$180	-0-
Town meetings	District, UW-EX	\$81 (mileage) ⁽²⁾	36	\$324	-0-
Informal meetings	District, UW-EX	\$243 (mileage) ⁽²⁾	108	-0-	\$972
Farm Field Tour	District, SCS, UW-EX	\$320 (trans) ⁽²⁾	84	-0-	\$756
Presentations	District, SCS, UW-EX	\$86 (mileage) ⁽¹⁾	24	\$216	-0-
Mass media	UW-Ex, District	-0-	144	\$1296	-0-
Personal contact*	District, SCS, UW-EX	\$1530 (mileage)	595	-0-	\$5355
Self-evaluation questionnaire	UW-Ex	-0-	30	-0-	\$450
Workshop	District, SCS, UW-EX	\$81 (mileage) ⁽²⁾	36	-0-	\$324
Mailings	District	\$180 (postage) ⁽²⁾	-0-	-0-	-0-
*Personal Contact during each year is estimated as follows:		Sub Total	\$386 ⁽¹⁾ + \$3135 ⁽²⁾	\$2016	\$9081
Year 1 - 200 contacts; Year 2 - 200 contacts; Year 3 - 150 contacts; Year 4 - 130 contacts.		Totals \$2402 ⁽¹⁾	\$12216 ⁽²⁾		
		(1) + (2) = \$14618			

absorbed/total = \$2402/\$14618 = 16%

(note: the affected land mass is approximately 12-14 percent of the total area of both counties)

Notes:

- (1) These costs can be absorbed by the existing educational endeavors of Lafayette and Grant Counties.
- (2) These costs are additional to the maximum expenditures of the counties for education.
- (3) The above estimates make no allowances for inflation. Of the total (\$14,618) cost, \$10,986 represents the amount subject to inflation. Inflating this for the appropriate time period (4 years maximum) at 10% annually, results in an inflated cost of \$15,708. This plus the portion of cost not subject to inflation (\$3632) results in a total inflated cost of \$19,340.
- (4) Salary estimates are derived by allowing \$9.00 per hour for professional/technical assistance, \$6.00 per hour for office/clerical assistance, and \$15.00 per hour (in the case of the self-evaluation questionnaire) for Extension specialist assistance. Approximately 33 percent has been included for benefits.

Technical Assistance:

Water quality agreements (contracts) will be drawn up between the landowners and designated management agency listing the best management conservation practices to be completed, the dollars to be cost-shared, the year the practice is to be installed. The contract will also state the length of serviceable life of each of the water quality practices according to the SWCD technical guide.

The Designated Management Agency will contact and maintain a list of landowners that have requested assistance in developing water quality agreements. Once requests are received the DMA will approve the request according to priority and a water quality contract will be developed with landowners through the staff representative of the DMA (ie: District or SCS employee). Upon completion of the contract with the landowner, the DMA will approve and sign the contracts. Staff of the DMA will be assigned as available to fulfill the water quality contracts, design, layout and construction check of the water quality practices.

Upon completion of a practice the District Conservationist will certify that the water quality practice meets the standards and specifications of the local Soil and Water Conservation District's Technical Guide. Each year an annual status review will be made and assigned by the landowners and the staff representative of the DMA (ie: SWCD District or SCS employee). Any contract being in non-compliance, the DMA will take actions necessary to bring the status of the contract back into compliance.

The DMA realizes there may be a shortage of trained technical staff but will consider any revenue possible to obtain sufficient technical assistance.

The following table illustrates the projected costs for applying best management practices in the priority management areas of the Galena River Watershed.

GRANT COUNTY

Practice or Activity	Av. An. Accomp.	Rates Per Hr.	7Yr. Goals	7 Yr. Hrs.	FY-80	FY-81	FY-82	FY-83	FY-84	FY-85	FY-86
Conservation plans	14 3500	40hrs/per	56 14000	2240	400	600	900	340			
Operating Units	315 51,488										
CROPLAND											
Contour Strip Cropping	1455 Ac.	5 Ac/Per	10,188 Ac.	2038	204	306	400	475	330	221	102
Conservation Tillage	854 Ac.	- - - -	5,978 Ac.								
Diversions	3038 Ft.	100 ft/per	21,266 Ft.	213	21	32	43	49	34	23	11
Terraces	84,111 Ft.	20 ft/per	588,777 Ft.	29439	2944	4416	5888	6771	4710	3238	1472
Grassed Waterways	33 Ac.	20 hrs/per	335,888 Ft. (231 Ac.)	4620	462	693	924	1063	739	508	231
Grade Stab. Structures	3.4	60 hrs/per	24	1440	144	216	288	331	230	158	73
WOODLAND											
Livestock Exclusion	34 Ac.	0.2000	239 Ac.	48	7	7	7	7	7	7	7
Tree Planting	1.4 Ac.	0.2 Ac./hr	10 Ac.	50	5	7.5	10	11.5	8	5.5	2.5
STREAMBANK STABILIZATION											
Fencing	341 Ft.	.0125	2385 Ft.	30	4	4	4	4	4	5	5
Shaping & Seeding	528 Ft.	.016	3697 Ft.	59	8	8	8	8	9	9	9
Rip Rap	681 Ft.	.05	4770 Ft.	239	24	31	48	55	38	26	17
Stream Crossings	.6	24 hrs/per	4	96	10	14	20	22	15	10	5
ANIMAL WASTE MGT.											
Feedlot Runoff Mgt.	5.6	24 hrs/per	39	936	94	140	187	215	150	103	47
Waste Storage Facility	5.3	60 hrs/per	37	2220	222	333	444	511	355	244	111
Critical Area Seeding	1	4/per	7.6 Ac.	30	4	5	5	5	4	4	3
ROADBANK STABILIZATION											
Critical Area Seeding	1.6	4/per	11	44	6	6	7	7	6	6	6
Roadway Box Inlet Structure	7	12 hrs/per	48	576	58	86	115	132	92	63	30
TOTALS					4217	6305	8398	9667	6731	4631	2132
Total Expenses, Salary & Mileage & Other Expenses					41262	58038	74820	84998	60373	44613	20981
Total Planning Time - - -					2240						
Total All Other Technical Time - - -					42,081						

LAFAYETTE COUNTY

<u>Practice or Activity</u>	<u>Av. An. Accomp.</u>	<u>Rates Per Hr.</u>	<u>7 Yr. Goals</u>	<u>7 Yr. Hrs.</u>	<u>FY-80</u>	<u>FY-81</u>	<u>FY-82</u>	<u>FY-83</u>	<u>FY-84</u>	<u>FY-85</u>	<u>FY-86</u>
Conservation Plans	(17) 3429	40 hrs/per	(68) 24,000	4,800	1400	1250	1150	1000			
Operating Units	160 31,392										
CROPLAND				7½ hrs.							
Contour Strip Cropping	1799 ac.	5 ac/per	12,594 ac.	2520	200	300	420	600	420	360	220
Conservation Tillage	1942 ac.		13,593 ac.	-	-	-	-	-	-	-	-
Diversions	4,000 ft.	100 ft/per	28,000 ft.	280	40	40	40	40	40	40	40
Terraces	142,834 ft.	20 ft/per	999,838 ft.	49,994	3,000	5000	8,000	10,000	9,994	8,000	6,000
Grassed Waterways	38 ac.	20 hrs/per	290,160 ft. (266 ac.)	5,285	500	850	1,000	800	800	700	635
Grade Stab. Structures	9	60 hrs/per	63	3,780	200	500	700	700	680	600	400
WOODLAND											
Livestock Exclusion	75	0.2000	525	105	15	15	15	15	15	15	15
STREAMBANK STABILIZATION											
Fencing	480 ft.	0.125	3360 ft.	42	6	6	6	6	6	6	6
Shaping & Seeding	4,110 ft.	0.016	28,770 ft.	462	66	66	66	66	66	66	66
Rip Rap	3,530 ft.	0.05	24,710 ft.	1,239	150	160	180	190	190	189	180
Stream Crossings											
ANIMAL WASTE MGMT.											
Feedlot Runoff Mgmt.	7	24 hrs/per	49	1,176	150	160	160	160	180	180	176
Waste Storage Facility	7	60 hrs/per	49	2,940	400	400	400	500	440	420	380
Critical Area Seeding	2	4/per	14	56	8	8	8	8	8	8	8
ROADBANK STABILIZATION											
Critical Area Seeding	6	4/per	42	168	24	24	24	24	24	24	24
Roadway Box Inlet Str.	6	12 hrs/per	42	504	72	72	72	72	72	72	72
TOTALS				73,351	6,231	8,851	12,241	14,181	12,935	10,880	8,222
Technical Expenses, Salary & Mileage & Other Expenses----				57,448	78,454	105,639	121,196	111,339	94,724	73,393	
Total Planning Time - 4,800 hrs.											
Total All Other Technical Time - 68,551 hrs.											

NEEDS AND COST OF PRIORITY AREAS OF GRANT AND LAFAYETTE COUNTIES

	Unit	Needs	Goal	Est. Av. Cost/Unit	Cost Sharing Rate	Total Cost of 75% Treatment
Contour Stripcropping	Ac.	30,376	22,782	\$16.00	50%	364,512
Conservation Tillage	Ac.	26,095	19,571	N/C	N/C	N/C
Diversions	Ft.	65,688	49,266	\$1.10	70%	54,193
Terraces	Ft.	21,118,153	1,588,615	\$2.30	70%	3,653,814
Grassed Waterway	Ft.	---	626,048	\$2.00	70%	1,252,096
Grassed Waterway	Ac.	834,731	(497 ac.)	---	---	---
Grade Stab. Structure	No.	116	87	\$7500.00	70%	652,500
Woodland						
Livestock Exclusion	Ac.	1,020	764	\$30.00	50%	382
Streambank Stabilization						
Fencing	Ft.	7,660	5,745	\$.75	70%	4,022
Shaping Seeding	Sq.Ft.	43,290	32,467	\$2.00	70%	22,727
Rip Rap	Ft.	39,307	29,480	\$15.00	70%	20,636
Stream Crossings	No.	5.5	4	\$2667.00	70%	10,668
Agricultural Waste Mgt.						
Feedlot						
Feedlot Runoff Mgt.	No.	117	88	\$12,000.00	70%	1,056,000
Waste Storage	No.	115	86	(max) \$6000.00	70% or max \$6,000	516,000
Critical Area Treatment	Ac.	26.1	196	\$250.00	70%	4,900
Road Bank Stabilization						
Critical Area Treatment	Ac.	71	53	\$250.00	70%	13,250
Inlet Structure	No.	120	90	\$550.00	70%	49,500
(Roadway Box)						

LAND TREATMENT TOTAL-----7,675,200

TECHNICAL ASSISTANCE TOTAL-----1,027,278

GRAND TOTAL-----8,702,478

Fiscal Management:

Because there are two counties involved in this program, there are two separate programs for fiscal management. The approximate cost sharing distribution will be 45% to Grant County and 55% to Lafayette County. The funds will flow from DNR to a special account within the Lafayette SWCD account.

A. Grant County Fiscal Management:

The Grant County Soil and Water Conservation District (SWCD) will enter into a contract with the Grant County Agricultural Stabilization and Conservation Service (ASCS) to perform fiscal management responsibilities. The ASCS will carry out all the fiscal management function assignments provided for in the contract with the SWCD as described in the following:

1. Accept requests for cost sharing assistance.
2. Assist in screening requests for cost sharing assistance.
3. Refer requests to responsible technical agency.
4. Prepare water quality contracts for DMA approvals.
5. Follow up on contracts issued.
6. Accept certifications of completion from participants.
7. Compute cost shares earned.
8. Report practice performance to DMA.
9. Maintain program records.
10. Report project accomplishments.
 - a. funds encumbered.
 - b. practices completed.
 - c. funds disbursed.

The Agricultural Stabilization and Conservation Service will:

1. Carry out all the fiscal management function assignments provided for by this contract as described.
2. Maintain records for cost sharing funds allocated to the project from State sources.

Reimbursement to ASCS for administrative services:

The Grant County SWCD and the ASCS mutually agree that the ASCS shall be reimbursed for administrative services at the rate of 1% of project funds available for cost sharing assistance with program participants.

Reimbursement will be made as follows:

1. At the beginning of each fiscal year 1/2 of 1% of the funds estimated to be expended to participants during that fiscal year. Estimates to be based on cost sharing assistance and mutual agreement.
2. At the end of the fiscal year the balance due to equal 1% of cost sharing assistance paid during that fiscal year.
3. At the beginning and end of each fiscal year the Grant County DMA will issue (or cause to be issued) a negotiable instrument to the Grant County ASCS committee to cover administration service for that fiscal year based on the previous schedule.

After certification, by the Grant County project manager, that individual projects in Grant County have been completed and meet specifications the lead D.M.A. (Lafayette County S.W.C.D.) will issue checks for payment to participants in Grant County.. These checks will be mailed to the Grant County Project Manager. The Project Manager will forward the checks to landowners.

In Grant County the records will be audited by the Project Manager, Designated Management Agency, Soil Conservation Service and Agricultural Stabilization and Conservation Service. The SCS and SWCD will maintain staff time records. ACP cost share funds may be used to supplement the Wisconsin Fund.

B. Lafayette County Fiscal Management Program:

In Lafayette County the Lafayette County Soil and Water Conservation District (DMA) will manage cost share funds and other implementation funds from the State Board of Soil and Water Conservation Districts (BSWCD) and will enter into contracts with DNR and BSWCD. These contracts will define the DMA's responsibility in documenting how such funds will be used.

The Lafayette County SWCD, as lead DMA, will receive all funds for the Galena Watershed program from the DNR and will maintain a special account within the SWCD account in the Lafayette County Treasury from which checks will be issued to project participants in both Lafayette and Grant Counties. The lead DMA will issue payments to participants after work has been completed to meet the terms of the landowner's contract with the DMA. This payment by the DMA will be to reimburse the landowners. Proof of payment to the contractor must be provided by the landowner. The DNR will then reimburse the lead DMA for amounts paid upon receipt of proof of payment from the lead DMA.

The procedure to be followed in the administration of these funds are:

1. Accept cost sharing applications. The SWCD in cooperation with SCS will be fully responsible for accepting cost sharing applications.
2. Screen cost sharing applications. The SWCD will screen all applications for eligibility for cost sharing assistance.
3. Approve cost sharing applications. The SWCD will make approvals. Technical assistance from SCS and SWCD will be employed in the survey, design, and the supervision of construction of approved projects.

4. Follow up on approvals. SWCD and SCS will be responsible for following up on approvals to determine if projects are being completed on a timely basis, what deadlines must be extended (etc.).
5. Compile performance reports. After completion of the project, the SWCD will make a report of all eligible costs.
6. Compute cost shares earned. The SWCD will compute cost shares earned prior to making approval.
7. Approve cost shares. SWCD will approve cost shares earned.
8. Issue payments to participants. SWCD will issue payments to participants using county checks and drawing from a special account within the SWCD account in the Lafayette County Treasury. Maintenance of necessary ledgers and records will be performed.
9. Maintain Program Records. The SWCD will be fully responsible for maintenance of program records. This will include all funding ledgers (annual and total for complete length of program) and individual farmer files including any long term agreements which are established. The SWCD will handle all day-to-day operations necessary for keeping records involved with this cost-sharing program.
10. Report project accomplishments. The SWCD will report project accomplishments on a timely basis.
11. Assist in auditing records. The SWCD will assist in auditing records for the life of the program.
12. Maintain staff time records. The SWCD and SCS will maintain complete records of time spent on the program.

Program Management:

The DMA's under contracts with the DNR and Board of Soil and Water Conservation Districts are responsible for the day-to-day program operation, including coordination of the program of implementation between DMA's and related natural resource conservation and management programs, integrating the water quality improvement programs with related regulatory programs, such as zoning ordinances, subdivision ordinances and erosion and sediment control ordinances and long range planning, evaluation and annual updating of the program.

Operational activities of the DMA include the following:

1. Budget development - will be done in September-October by SWCD staff and supervisors.
2. Coordination of education program with entire program. This will be administered by the Project Manager and University Extension Service Agents.
3. Filing reports with DNR and BSWCD - SWCD
4. Monitoring subcontracts to see that work is being accomplished on time - Project Manager, SCS and (ASCS in Grant County).

The DMA's under contract for use of state funds, should involve all DMA's within the geographical area of the priority watershed and seek the advice and assistance of cooperating agencies in the following activities:

1. Determining which practices to fund through available cost-share programs.
2. Annual program review.
3. Filing reports with the state on the progress of the water quality program in the Galena River Watershed.

Maintenance of Best Management Practices:

The guidelines for the Nonpoint Source Water Pollution Abatement Program spell out maintenance of practices and penalties involved for failure to carry out obligations by the landowner. The requirements can be found in Chapter NR 120 of the Wisconsin Administrative Code.

A precise method for repayment of state funds by cost-share recipients is not clearly indicated and must be defined in the watershed plan. The following steps will be taken:

1. Identification of violations will be obtained through annual status reviews of implemented best management practices (BMP).
2. The Designated Management Agency will contact the landowner/operator in control of the BMP in violation. The contact will be followed up with a formal letter explaining details of the violation and possible alternatives that may be followed to bring the violation into compliance.
3. The final action will be to submit the violation to the District Attorney for further action and proceedings.

The Designated Management Agency is responsible for maintenance of all best management practices within the watershed project because the Department of Natural Resources has entered into agreement with the Designated Management Agency and not the individual landowner.

The following table is a summary of the annual estimated cost for project manager, fiscal management, and program management. Funds for these costs are anticipated to be allocated by BSWCD.

Grant County

District Staff

576 hours at \$6.00 per hour = \$3456.

ASCS at 1% of funds

Expended to participants = \$2880.
\$6336

Lafayette County

District Staff

1220 hours at \$6.00 per hour = \$7320.